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## Venturing into the unknown, but not for the first time

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# -- CHAPTER 1 --

## INTRODUCTION

### 1.1. Introduction

Entrepreneurship matters, not at the least because entrepreneurs disproportionately contribute to job creation, innovation, as well as economic productivity and growth (van Praag & Versloot, 2007). Indeed, whatever its specific contribution, the broad consensus is that entrepreneurship creates value for individuals, organizations, and society as a whole (Hitt, Ireland, Sirmon, & Trahms, 2011). Providing a better understanding of the entrepreneurial process – the journey from non-existence to existence of new economic activities (Davidsson, 2015; McMullen & Dimov, 2013; Selden & Fletcher, In Press) – is therefore essential to anyone interested in facilitating the far-reaching contributions of entrepreneurship. Whether it is for policy makers, educational programs, investors and other resource providers, active entrepreneurs themselves or individuals who aspire to become one, there is a clear and timely need to examine how, by whom, and with what effects entrepreneurial ventures come to be (Shane & Venkataraman, 2000; Venkataraman, 1997). Nevertheless, central elements of the entrepreneurial process remain elusive, leaving “blind-spots” on the path of those who seek to promote and gain from entrepreneurship.

Crucially, what entrepreneurs do, along with how they make decisions in the face of uncertainty, is a puzzling issue that research has yet to unravel (Baron, 2009; Bird & Schjoedt, 2009; Shepherd, Williams, & Patzelt, 2015; Venkataraman, Sarasvathy, Dew, & Forster, 2012). This is in spite of the fact that action under uncertainty continues to be the cornerstone for most theories of the entrepreneur (Knight, 1921; McKelvie, Haynie, & Gustavsson, 2011; McMullen & Shepherd, 2006). Indeed, no matter what their business is about, entrepreneurs are bound to encounter uncertainty in decisions about a variety of issues, including idea generation, product development, as well as resource acquisition, marketing, and partnership formation (Shepherd et al., 2015). Research tells us that systematic differences in how entrepreneurs deal with these “typical” decisions (Sarasvathy, 2001; Wiltbank, Dew, Read, & Sarasvathy, 2006), are not only shaped by past experiences (Fern, Cardinal, & O'Neill, 2012; Sarasvathy, 2008; Sørensen & Fassiottto, 2011), but can also have a lasting impact on venture performance (e.g., Brinckmann, Grichnik, & Kapsa, 2010; McKelvie, DeTienne, & Chandler, 2013; Read, Song, & Smit, 2009b). In other words, entrepreneurs' prior experience, decision-making under uncertainty, and venture performance are interrelated themes essential to our understanding of entrepreneurship and the entrepreneurial process (Shane, 2012; Shane & Venkataraman, 2000; Venkataraman et al.,

2012).

However, research still lacks integration of systematic evidence about the extent to which entrepreneurs can bring their past to bear on venture performance (Frese, Rousseau, & Wiklund, 2014; Ireland & Webb, 2007; Rauch & Frese, 2006). In particular, theory does not adequately explain the intricate relationships between prior experience, an uncertain future, and how entrepreneurs engage with decision-problems (Grégoire, Corbett, & McMullen, 2011; Mitchell et al., 2007; Sarasvathy, 2008). Nor does it fully explicate the mechanisms that may enable inexperienced entrepreneurs to better deal with these tasks (e.g., Haynie, Shepherd, & Patzelt, 2010b). For instance, consider evidence showing that highly experienced entrepreneurs think differently from other people about decisions involving uncertainty (Baron & Henry, 2010; Dew, Read, Sarasvathy, & Wiltbank, 2009a). It seems reasonable to attribute these differences to years of experience in starting and running new ventures (e.g., Sarasvathy, 2001; Sarasvathy, 2008). After all, most entrepreneurial tasks involve extreme uncertainty (Alvarez & Barney, 2005; Knight, 1921; McMullen & Shepherd, 2006) and can therefore become formative to how one thinks and behaves in an uncertain context (Krueger, 2007). Yet even if we accept the accuracy of such claims, we still need to know precisely what is it that makes these, or any other experience, so powerful. What, specifically, is driving the relationship between prior experience and entrepreneurial decision-making? Further, when it comes to promoting an entrepreneurial thinking of the kind experienced individuals regularly use, are there any alternatives to direct, and often lengthy, practice in starting new ventures? What about other work experiences for example? Since most entrepreneurs are indeed first-time entrepreneurs (Sørensen & Fassiottto, 2011) these are important questions that remain almost entirely unanswered (e.g., Baron, 2009).

Seeking to better understand these issues, this dissertation consists of four studies that apply multiple methods to jointly investigate how entrepreneurs utilize their (past) careers to subsequently engage in processes of decision-making and action under uncertainty, ultimately shaping the (future) performance of their ventures. With this introductory chapter I aim to position these studies, independently and collectively, within the current discourse of entrepreneurship research. In particular, I begin with a theoretical overview of key concepts and themes, followed by the questions to be addressed in this dissertation and the research approach taken to address them. I conclude with a short summary of the remaining chapters, providing an overview of the studies.

## 1.2. Conceptual Background

Over the years the terms<sup>1</sup> “entrepreneur” and “entrepreneurship” have been widely diffused in modern capitalist economies to convey new business formation as a desirable economic function (Aldrich & Yang, 2013; McGrath & Desai, 2010). Indeed, corroborating its popular position in the public's eye, a long tradition of research evidenced entrepreneurship as a catalyst for technological, economic and societal advancement (Baumol, 2002; Schumpeter, 1934; van Praag & Versloot, 2007). Still, what entrepreneurship precisely means remains a subject of ongoing scholarly debate and the literature frequently mixes occupational, structural and functional definitions (see Foss, Klein, Kor, & Mahoney, 2008 for a review). Hence, before we get going, this basic point should be clarified. For the purpose of the present discussion, and because I am interested in entrepreneurship as an organizational or economic function, rather than a particular set of personality characteristics (e.g., risk-taker) or formal positions (e.g., owner-manager), I adopt the following definition<sup>2</sup>: “entrepreneurship is the process through which new economic activities and organizations come into existence” (Davidsson, 2015: 2). Inevitably, entrepreneurs are those actors who go through this process (Shane & Venkataraman, 2000).

In this dissertation I zoom-in on individual entrepreneurs who, despite other determinants at various levels of analysis (e.g., environmental, organizational, team, etc.) (Hitt, Beamish, Jackson, & Mathieu, 2007; Ireland & Webb, 2007), continue to take center stage in research on why, when and how the entrepreneurial process operates (Baron, 2007; Frese & Gielnik, 2014; Shane & Venkataraman, 2000). Indeed, taking such a micro-level perspective entails asking questions about why some entrepreneurs are more successful than others (e.g., Baron & Henry, 2010) and seeking to contribute to a larger research program engaged with how entrepreneurs ultimately shape firm-level outcomes such as survival, profit, or growth (e.g., Baron, 2007; Nelson, 2003; Shane & Stuart, 2002; Sørensen & Fassiottto, 2011). I acknowledge, however, that any comprehensive answer to such “big questions” is beyond the scope of the present study.

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<sup>1</sup> I will use the term entrepreneur and firm founder interchangeably.

<sup>2</sup> For further detail and an ongoing debate about definitions in entrepreneurship research see: (Alvarez & Barney, 2013; Alvarez, Barney, & Anderson, 2013; Davidsson, 2015; Dimov, 2011; Eckhardt & Shane, 2013; Foss et al., 2008; Hitt et al., 2011; Sarasvathy & Dew, 2013; Shane, 2012; Shane & Venkataraman, 2000; Venkataraman et al., 2012).

Nonetheless, I intend to illuminate key issues pertaining to these larger research themes by drawing on, and bringing together, two broad theoretical perspectives in the study of entrepreneurs.

First, I use career theory (Arthur, Hall, & Lawrence, 1989; Sørensen & Fassiottto, 2011) to conceptualize entrepreneurs as carriers of their own past – a mosaic juncture of transferable personal resources, accumulated labor market experiences, as well as learned behaviors and habitual patterns of thinking (Bird, 1996; Defillippi & Arthur, 1994; Dobrev & Barnett, 2005; Fern et al., 2012; Sørensen & Fassiottto, 2011). Second, proceeding on the general assumption that the mere possession of resources is never sufficient to generate value (McMullen & Shepherd, 2006; Priem & Butler, 2001a; Sirmon, Hitt, & Ireland, 2007), I relate the notion of career to recent advances in the study of entrepreneurial mechanisms – the decisions, actions, and interactions that entrepreneurs actually use in building their ventures (Sarasvathy, 2001; Venkataraman et al., 2012). In particular, I argue that ideas about how individuals deal with uncertainty (McMullen & Shepherd, 2006; Milliken, 1987) are largely congruent across (1) contemporary career theory (Sullivan & Baruch, 2009); and (2) effectuation – an emerging theoretical perspective on entrepreneurial decision-making and action (Sarasvathy, 2001). Taken together, these theoretical perspectives provide important insights not just into what entrepreneurs have, or what they do, but also why and how they do it. As a result, these themes also define the theoretical boundaries within which this dissertation is set to offer significant contributions (an issue that I revisit in more detail at the final chapter of this dissertation).

### **1.2.1. The Entrepreneur: A Career Perspective**

As I started to outline above, much of entrepreneurship research to date has been occupied with the task of determining what combination of individual factors and environmental conditions may breed venture creation and success (e.g., Frese & Gielnik, 2014; Hitt et al., 2011). As part of this inquiry, an influential stream of studies takes a career perspective by focusing on the fact that most entrepreneurs emanate from established firms (Sørensen & Sharkey, 2014), and exploring how career histories shape entrepreneurial outcomes (Audia & Rider, 2006; Carroll & Mosakowski, 1987; Dobrev & Barnett, 2005; Nanda & Sørensen, 2010; Shane & Stuart, 2002; Sørensen, 2007; Sørensen & Fassiottto, 2011). A career perspective is important because careers represent key inputs into processes linking individual-level variables to firm founding (Shane & Khurana, 2003). For example, careers matter to the entrepreneurial process to the extent that they

generate qualitative differences in the experiences and knowledge that entrepreneurs bring to their venture (e.g., Dencker, Gruber, & Shah, 2009; Helfat & Lieberman, 2002). As a result, careers also create opportunities for individuals to build confidence in their ability to engage with entrepreneurial decision-problems (Bandura, 1997; Chen, Greene, & Crick, 1998; Fern et al., 2012; Sarasvathy, 2008). Even more, careers facilitate the formation of social networks, which represent important conduits for opportunities and resources (Elfring & Hulsink, 2003; Shane & Stuart, 2002; Stuart & Sorenson, 2007).

For the most part, however, career studies in the entrepreneurship literature are informed by a strong sociological doctrine emphasizing the role of existing organizations in either prompting or hindering individuals' entrepreneurial behavior, and thus tend to portray entrepreneurs as "organizational products" (Freeman, 1986). Consequently, absent from extant theories is the notion of individual career agency – "the process of work-related social engagement, informed by past experiences and future possibilities, through which an individual invests in his or her career" (Tams & Arthur, 2010: 630). This omission of agency from current discussions of careers in entrepreneurship research is somewhat surprising given Hannan's (1988: 171) long-standing observation that: "an obvious but easily overlooked fact is that new firms and new organizational forms are created by individuals trying to fashion careers". Nevertheless, because I would like to be more consistent with a view of entrepreneurs as proactive economic agents (cf. Shane & Venkataraman, 2000), I seek to examine the relationship between careers and entrepreneurship under the assumption that individuals have real clout over the evolution of their careers (e.g., Arthur & Rousseau, 1996).

Thus, for the purpose of this dissertation, in addition to writings about careers in entrepreneurship (e.g., Sørensen & Fassiotto, 2011), I draw on advances in the study of organizational careers – a broader field of research looking at the careers of employees in established organizations (Arthur et al., 1989; Gunz & Peiperl, 2007). Indeed, the main message from contemporary career theory is that individuals are increasingly becoming "agents of their career destinies" (Inkson & Baruch, 2008: 217). I therefore adopt an expansive definition of career as "an individual's work-related and other relevant experiences, both inside and outside of organizations, that form a unique pattern over the individual's life span" (Sullivan & Baruch, 2009: 1543). Conceptualized in this way, one's career conveys not only a structural description of positions held, but also consists of the agentic career strategies that were used to navigate to

these positions. Next to acknowledging movement between jobs, occupations or industries, this definition leaves room for individual interpretation of career events and the decisions that shaped them.

Using this broad definition, career scholars have developed several frameworks to describe a wide variety of career paths, experiences, orientations, and behaviors (Sullivan & Baruch, 2009). For example, while in the past careers were viewed as consisting of several linear stages evolving within a single organization (e.g., Rosenbaum, 1979; Super, 1957; Wilensky, 1961), the changing nature of work, and rising uncertainty among workers, ultimately led to the arrival “new” career types (e.g., DiRenzo & Greenhaus, 2011; Sullivan, 1999; Sullivan & Baruch, 2009). Among these, the “boundaryless career” (Arthur & Rousseau, 1996) and “protean career” (Briscoe, Hall, & Frautschy DeMuth, 2006; Hall, 1996) are prototypical models in which one's working life is viewed as independent from organizational structures and may therefore require individuals to take a lot more responsibility for career development (Briscoe, Henagan, Burton, & Murphy, 2012; Parker, Khapova, & Arthur, 2009). Put differently, faced with increasing levels of uncertainty about their careers, individuals tend to shift their focus away from what their current employer planned for them and toward general employability, leveraging personal career resources to gain a sense of control (DiRenzo & Greenhaus, 2011). This agentic facet of contemporary careers is underscored by DeFillippi and Arthur (1994) who further suggest that individuals are now required to analyze, actively invest in, and continuously develop sets of transferable resources (i.e., career capital). Specifically, DeFillippi and Arthur's (1994) career capital framework speaks of individual resources as three interrelated “ways of knowing”: (1) knowing-why (identity and motivation), (2) knowing-how (skills and expertise), and (3) knowing-whom (relationships and networks) (e.g., DiRenzo & Greenhaus, 2011; Eby, Butts, & Lockwood, 2003; Parker et al., 2009). In fact, this framework mirrors similar developments in both entrepreneurship research (Sarasvathy, 2001), and strategic management (Adner & Helfat, 2003; Kor & Mesko, 2013), which also emphasize a threefold composition of individual resources.

The notion of career capital, as well as other concepts related to contemporary career experiences (Sullivan & Baruch, 2009), complement existing knowledge about the careers of entrepreneurs (Sørensen & Fassiotto, 2011), and provide a rich theoretical landscape from which to draw on. Hence, career theory is used extensively throughout the present dissertation, and



serves as a foundation for the study of how entrepreneurs impact their firms.

### **1.2.2. Entrepreneurial Mechanism: Effectual Decision-Making and Action Under Uncertainty**

If entrepreneurs and their careers are indeed essential to the process by which new ventures are created (Sørensen & Fassiottto, 2011), it is only reasonable to suggest that some aspects of their cognition and behavior when starting-up are critical as well (Aldrich & Yang, 2013; Baron, 2007; Bird & Schjoedt, 2009). Like any other form of capital, career resources cannot guarantee the creation of value without entrepreneurial action (Bird & Schjoedt, 2009; Priem & Butler, 2001a; Sirmon et al., 2007). Venture creation and success therefore depend not only on what entrepreneurs have acquired prior to starting up, but even more critically, on what they do during the startup process. In short, “entrepreneurship requires action” (McMullen & Shepherd, 2006: 132), and researchers are called upon to make sense of how entrepreneurs think, make decisions, and act (Dimov, 2011; Shepherd et al., 2015). As Baron (2007: 168) puts it: “given that entrepreneurs play an important role in new venture creation, just what is it that they do?”

The canon of what we know about “what entrepreneurs do” is growing rapidly (see Bird & Schjoedt, 2009 for a review). For example, scholars have recently identified no less than 32 general models of the entrepreneurial process, specifying a range of decisions and actions (Moroz & Hindle, 2012). The active elements in these models, so-called “entrepreneurial mechanisms”, include a mix of strategies, techniques, heuristics, decision-making logics, and actions, used by entrepreneurs to construct their ventures (Sarasvathy & Venkataraman, 2011; Venkataraman et al., 2012). Table 1.1 lists a selective (and admittedly incomplete) assortment of the most important entrepreneurial mechanism identified in recent studies. Taken together, these mechanisms point to a theoretical concern in how the entrepreneur interacts with the environment by looking at the proximal outcomes of entrepreneurial cognitions, which represent a behavioral driver of venture outcomes (Bird & Schjoedt, 2009). Thus, although theories of entrepreneurial mechanisms often refer to what is essentially a cognitive process (Grégoire et al., 2011), they do specify a range of entrepreneurial behaviors informed by it (e.g., Sarasvathy, 2001). Findings from studies applying these theories show that entrepreneurial mechanisms are

practically relevant (Venkataraman et al., 2012), and there is much value in further comparing and contrasting them, a task which others have already started to undertake (e.g., Fisher, 2012). Nevertheless, for the remainder of this dissertation I take particular interest in “Effectuation”<sup>3</sup> (Sarasvathy, 2001).

**Table 1.1.** Entrepreneurial mechanisms

Entrepreneurial Mechanism	Source
Causation	(Sarasvathy, 2001)
Effectuation	(Sarasvathy, 2001)
Bricolage	(Baker & Nelson, 2005)
Improvisation	(Baker, Miner, & Eesley, 2003; Hmieleski & Corbett, 2008; Miner, Bassof, & Moorman, 2001)
Networking behavior	(Hallen & Eisenhardt, 2012; Vissa, 2012)
Pattern recognition	(Baron, 2006; Baron & Ensley, 2006)

*Adapted from:* (Venkataraman et al., 2012)

Effectuation is a theory of entrepreneurial decision-making and action under uncertainty (Sarasvathy, 2001). In the context of starting a new venture, it generally refers to a set of cognitive heuristics that share an internally consistent logic guiding entrepreneurial action (Sarasvathy, 2008). More specifically, instead of waiting for the perfect opportunity or even actively searching for it, effectuation highlights immediate entrepreneurial action based on the means available at hand (Sarasvathy, 2001). Keen on exploring what they can do right now, effectual entrepreneurs stubbornly refuse to rely on predictions and forecasts (Dew et al., 2009a; Read, Dew, Sarasvathy, Song, & Wiltbank, 2009a). Their numerous venture ideas coalesce through an evaluation of “affordable-loss” (Dew, Sarasvathy, Read, & Wiltbank, 2009b). In other words, determining what to do next is a matter of considering whether the downside is acceptable, rather than calculating the attractiveness of a predicted upside (Wiltbank et al., 2006). Consequently, instead of chasing investors and other resource owners who can help in achieving a pre-set objective, effectuation keeps goals flexible, open for co-creation with others (Sarasvathy & Dew, 2005), and ready for surprising changes (Harmeling, 2011).

A more basic analogy might be helpful in grasping what distinguishes effectuation from traditional – “causal” – approaches to entrepreneurship. Think of the parallels between starting a

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<sup>3</sup> In chapter 5 I discuss another entrepreneurial mechanism, namely; networking behavior, yet the central theoretical lens remains an effectual one.

new venture and painting (e.g., Cornelissen, 2013). A causal painting process may begin with a painter determined to draw a specific portrait. He or she has to select the suitable materials, shop for the correctly sized canvas, and efficiently paint a single accurate picture according to pre-set specifications, all the while, avoiding any surprises or deviations from the plan. An effectual counter-example would involve a painter who might be inspired in whatever way, perhaps a random encounter with a muse or a hazy daydream. The painter does not bother with “missing” colors or a “wrongly” shaped canvas, but instead uses any materials already available to create a variety of possible pictures. As long as it agrees with a fixed downside cost (i.e., “what can I afford to lose even if all fails?”), any new possibility arising in the process is welcome, and unexpected surprises are leveraged to create new objectives. In fact, it is quite possible that the end result in the effectual case would not have been imaginable at the outset.

Before elaborating on it further, as I do in the relevant chapters below, it is important to first motivate my choice of effectuation as this dissertations’ primary theoretical lens on entrepreneurial mechanisms. First, effectuation has been hailed as “a paradigmatic shift in the way that we understand entrepreneurship” (Perry, Chandler, & Markova, 2011: 2). Important in this regard is the fact that effectuation is not just based on formal economic theorizing, but was substantively derived from empirical studies looking at what entrepreneurs actually do (Dimov, 2011; Sarasvathy, 2008). Second, while effectuation can stand on its own as a theory of entrepreneurial mechanism (cf. Arend, Sarooghi, & Burkemper, 2015), it is also helpfully contrasted with “Causation” – a model representing standard-economic thinking on entrepreneurship (Fisher, 2012). This juxtaposition of effectuation and causation is unique among other theories of entrepreneurial action and defines a wider, and potentially more insightful, conceptual frame. Third, and most importantly, because effectuation was originally induced from a study of entrepreneurial expertise, it includes, next to an implicit link to performance, a built-in concern with career related concepts, making it the best fit with my specific interest in careers. For instance, studies of expert-novice differences, which attend to the role of prior experience, are quite common within effectuation literature (e.g., Dew et al., 2009a). Similarly, the notion of career-capital is alluded to by Sarasvathy (2001) who maintains that entrepreneurs begin the effectual process with three categories of resources: “they know who they are, what they know, and whom they know” (250). Even more, the concept of uncertainty (McMullen & Shepherd, 2006) is central to both career theory (Arthur & Rousseau, 1996) and

effectuation literature (Sarasvathy, 2008), making it a suitable candidate for further theorizing about their relationship. Hereafter, I draw on effectuation literature when examining entrepreneurial mechanisms and therefore build important links between entrepreneurs' careers, decision-making, and action under uncertainty.

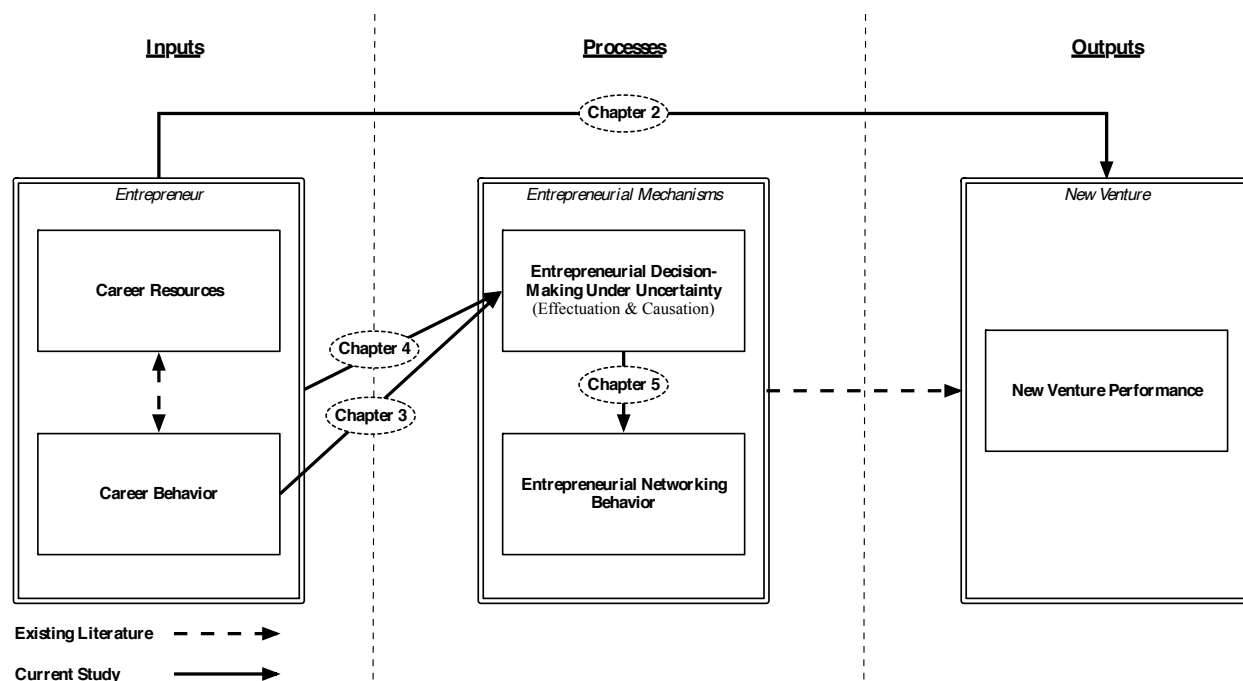
### 1.3. Research Problem and Questions

With these key concepts and themes in mind, the following question stands as the overarching research problem at the basis of my empirical investigation:

*How do entrepreneurs utilize their careers to subsequently engage in processes of decision-making and action under uncertainty, ultimately shaping the performance of their ventures?*

In order to address this problem, I've developed an integrative research framework (Figure 1.1) that incorporates the role of entrepreneurs' careers, their use of entrepreneurial mechanisms, and new venture performance. The framework is inspired by Hitt et al's (2011) general model of strategic entrepreneurship and it therefore distinguishes between inputs, processes, and outputs. In addition, Figure 1.1 illustrates the relationships examined by each specific study and where these studies are located within this dissertation.

**Figure 1.1.** Research framework



Below, I go on to discuss the specific research questions underlying each of these relationships in turn: (1) entrepreneurs' career resources and new venture performance; (2) entrepreneurs' prior experience and effectuation; and (3) effectuation and networking behavior.

### **Relationship 1: Career Resources and New Venture Performance**

So far, I've highlighted the fact that when starting a new venture, entrepreneurs are able to make use of personal resources as accumulated along their careers (Defillippi & Arthur, 1994; Shane & Khurana, 2003; Sørensen & Fassiottto, 2011). Indeed, much of entrepreneurship research assumes that these individual resource endowments have considerable impact on venture processes and outcomes (e.g., Audia & Rider, 2006; Baum & Bird, 2010; Brüderl & Preisendörfer, 1998; Shane & Stuart, 2002). Yet, the nature of entrepreneurship as a multidisciplinary field makes any attempt to specify the most critical resources a daunting task. Rather than taking a more comprehensive view, studies have tended to examine singular factors or processes, producing a body of literature splintered into diverse theoretical perspectives and methodological approaches (Ireland & Webb, 2007). Hence, the development of relatively distinct spheres of inquiry does not only represent neglected opportunities for these studies to build on each other, but has also left this research difficult to interpret as a whole (Gartner, 2007). For instance, new venture performance has been linked to psychological accounts of entrepreneurial personality (Frese & Gielnik, 2014), to economically derived theories of founders' human capital (Unger, Rauch, Frese, & Rosenbusch, 2011), and to sociological expositions of their social networks (Stam, Arzlanian, & Elfring, 2014). Whereas elements of parsimony, specificity, and precision often dictate a narrower purview on key constructs, this 'disciplinary divide' may undermine our ability to engage with the shared phenomena of interest (Ireland & Webb, 2007; Molloy, Ployhart, & Wright, 2011). Put differently, there is a clear need to zoom-out and recount what we know, as well as explore points of interaction between otherwise disconnected views on entrepreneurs' resources and how they come to shape new venture outcomes. In order to address this need, and to provide a solid conceptual foundation for subsequent chapters, the first objective of this dissertation is to investigate the following question:

1. *What is the extent to, and conditions under which, founders' career resources influence new venture performance?*

Guided by insights from career theory, I address this question in chapter 2. In particular, I use DeFillippi and Arthur's (1994) career capital framework in combination with meta-analytical techniques to organize and integrate the results from 15 years of empirical work in the field. The central argument advanced in this study is that when we look at entrepreneurs' resources as career capital it allows for a better empirical overview on how founders contribute to new venture performance. The findings generally support this argument but also suggest that career resources explain only a small to moderate portion of the variance in venture performance, thereby implying that we should further unpack the processes underlying these relationships.

### **Relationship 2: Prior Experience and Effectual Decision-Making Under Uncertainty**

On the premise established in chapter 2, namely; that careers are indeed important, but that their relationships to venture outcomes are likely to be mediated by entrepreneurial mechanisms, I've designed two empirical studies exploring career experiences (and the lack thereof) as antecedents to effectuation and causation – important mechanisms of how entrepreneurs make decisions under uncertainty.

Indeed, when starting a new venture, entrepreneurs are required to take strategic decisions in the face of fundamentally unpredictable situations (Shepherd et al., 2015). These decisions are important because they are powerful in shaping the venture's evolution (Aldrich, 1999; Fern et al., 2012). Differences between causation and effectuation – two decision-making logics that are commonly applied in these settings – were linked in prior research to experts' extensive career in starting and operating new ventures (Dew et al., 2009a). In particular, research exposed a robust relationship between entrepreneurial experience and effectuation (Sarasvathy, 2008; Sarasvathy, 2012). Nevertheless, while the assertion that experts' career make them think and act differently than novices is highly intuitive, scholars struggle to reject alternative explanations (Baron, 2009), and fail to offer valid interpretations for data showing that novices may also use effectuation (e.g., Brettel, Mauer, Engelen, & Küpper, 2012; Chandler, DeTienne, McKelvie, & Mumford, 2011). I therefore take two steps to stretch the meaning of career experience beyond the restrictive notion of entrepreneurial experience per-se; First, I begin exploring:

2. *How do prior career experiences shape entrepreneurs' preference for causal and effectual decision-logics?*

Second, I examine what happens in the absence of any prior experience by investigating the role of entrepreneurial self-efficacy (i.e., confidence in entrepreneurial ability) (Chen et al., 1998; Hmieleski & Corbett, 2008) and situational framing (i.e., interpretation of situations as opportunity or threat) (Dutton & Jackson, 1987) in predicting novices' use of effectuation under uncertainty. This particular interest is captured with the following research question:

3. *What is the role of entrepreneurial self-efficacy and situational framing in promoting the use of effectuation under uncertainty?*

Taken together, these questions reflect a broader concern with the reasons for which entrepreneurs, confronted with identical conditions, vary in their reliance on effectuation and causation. I address this issue in chapters 3 and 4. In particular, chapter 3 argues that it is indeed career experiences that drive entrepreneurs' preference for a certain decision-making logic. Yet, unlike the limiting definitions of career experience as used in past research (i.e., experience equals prior involvement in starting a new venture), I consider any and all career experiences. In turn, I qualitatively induce a set of career strategy behaviors (DiRenzo & Greenhaus, 2011) that are not directly tied to the task of establishing new ventures, but rather become such if and when entrepreneurship is initiated (Aldrich & Yang, 2013). The core argument in this study speaks to the fact that career behaviors, whether before entrepreneurial entry or after it, are enacted in response to experiences with career uncertainty, and can therefore become key drivers of entrepreneurial decision-making. Essentially, this study suggests that uncertainty, regardless of the context in which it is experienced and acted upon, has the potential to shake foundational assumptions about the future and our ability to handle it. Individuals who, throughout their careers, learned to reduce emphasis on prediction, specific goal setting and planning, while at the same time uphold a proactive stance towards career development, are more likely to transfer this logic of thinking to their entrepreneurial decisions.

In chapter 4 I attempt to generalize this logic even further by moving away from the notion of career altogether and turning to explore what happens when inexperienced individuals

encounter entrepreneurial decision problems under uncertainty. Hence, tending to the other side of the “experience coin” (e.g., Haynie et al., 2010b), I use an experiment to study the role of entrepreneurial self-efficacy (ESE) and situational framing under uncertainty – important antecedents of decision-making in general that do not necessarily originate from experience. Once again, the results make clear that variables, other than direct experience in starting and operating new ventures, are important to effectuation literature. In particular, when an entrepreneurial situation is highly uncertain, more confident (higher ESE) novices do not only recognize this uncertainty as an obstacle to prediction, but also as an opportunity to act, thereby applying effectual logic to their decisions. Conjointly, these studies reveal the value of considering alternative antecedents for entrepreneurial decision-making and action, especially if we care to know more about those with little or no prior entrepreneurial experience.

### **Relationship 3: Effectuation and Networking Behavior**

Following up on suggestions positioning effectuation as an emerging theoretical perspective in entrepreneurship scholarship more generally (Perry et al., 2011; Sarasvathy & Venkataraman, 2011; Venkataraman et al., 2012), I turn to look at how it may inform research on entrepreneurial networking. Investigations of entrepreneurial networking (e.g., Hallen & Eisenhardt, 2012; Vissa, 2012) take specific interest in what entrepreneurs do to create and shape their networks – “the pattern of relationships that are engendered from the direct and indirect ties between actors” (Hoang & Antoncic, 2003: 166). However, I identify a serious problem in existing studies as they fail to reconcile prevalent conceptualizations of entrepreneurs as heroic architects who strategically pursue their pre-defined networking goals (e.g., Hallen & Eisenhardt, 2012; Stuart & Sorenson, 2007), with the ubiquitous uncertainty surrounding entrepreneurial action (Alvarez & Barney, 2007; McMullen & Shepherd, 2006). Thus, it is unclear how entrepreneurs should network strategically when the future is unpredictable? Or how they might intentionally target desired ties when their own goals are still unknown? I therefore pose an ostensibly simple question:

#### *4. How do entrepreneurs engage in networking under uncertainty?*

I then address this question in Chapter 5 by providing a critical review of the current literature and suggesting effectuation as a useful alternative lens from which to examine entrepreneurial



networking. I argue that instead of favoring an overly planned perspective, scholars should pay close attention to the notion of uncertainty. Further, in focusing on effectuation, I provide more detail about how entrepreneurs may actually act under extreme uncertainty and flesh out an effectual networking strategy as a distinct process of endogenous network change.

#### **1.4. Research Approach**

In line with the broad research problem as defined above, and in order to address the specific research questions derived from it, the approach taken here followed a hybrid research design including multiple methods and a variety of samples. As stressed by McGrath, (1981), the process of conducting research necessarily implies a series of inherently flawed choices that the researcher needs to "live with" rather than "solve" with a single perfect solution. It is therefore crucial to try to triangulate as many elements of the research method, taking into consideration study design, settings for data collection, analytical strategies, and data sources (Scandura & Williams, 2000). In my attempt to do so, I designed and executed four studies using the following methods: (1) a meta-analytic review of prior empirical studies; (2) grounded-theory procedures involving interviews and verbal protocol analysis with a sample of entrepreneurs; (3) a randomized-controlled-experiment with an inexperienced student sample; and (4) a conceptual paper focused on forging new theoretical insights. Therewith, I was primarily working towards improving the quality of my conclusions and offering robust and generalizable recommendations for scholars and practitioners alike. In retrospect, however, my overall approach came about just as much from the sequence of studies conducted, as it did from my planned research strategy. In other words, my plan was adaptive and changed in response to my own learning process and progression through each of the studies. I therefore believe that in providing a few more details about my movement from one study to the next I may better explain the methodological choices that I had to "live with". In sum, the research approach of this dissertation consists of three stages.

First, I used a systematic review to pull together and organize a dataset of documented relationships between career capital constructs at the founder level, and venture performance measures at the level of the firm. Data points were obtained from 72 previously reported scientific studies with an overall sample size of 25,562 and were subsequently analyzed using meta-analytical techniques – specialized statistical procedures for research integration (Hunter & Schmidt, 1990; Hunter & Schmidt, 2004; Lipsey & Wilson, 2001). This review process enabled

an evaluation of the state of prior research through an empirical assessment of relevant relationships. Thus, the analysis did not only serve as means to test hypotheses and answer a theoretically relevant research question, but also facilitated the identification of important research gaps and discovery of unanswered questions. Specifically, the significance of advancing a process-oriented research in this domain was made visible by showing that studying static career resources as inputs was not providing a sufficient explanation for outputs at the firm level. Hence, this first step pushed me to further explore the mechanisms and contextual factors that link entrepreneurs' careers and venture performance, leading me to look into effectuation theory.

In the second stage, I used an exploratory-qualitative approach, conducting interviews and verbal protocol analysis with a sample of 28 entrepreneurs, to investigate the processes and mechanisms through which prior career experience may be related to entrepreneurs' decision-making. My objective here was to build theory rather than test it (Eisenhardt, 1989). Consistent with my research question, I selected a theoretically relevant sample that included active entrepreneurs from a variety of industries and backgrounds (Suddaby, 2006), and adopted an inductive grounded theory approach (Glaser & Strauss, 1967; Pratt, 2009). As new insights started to emerge from the data it became clear that studying the antecedents of effectuation was a fruitful line of inquiry. Indeed, the conclusions from this qualitative study motivated the design of a quantitative study to focus my search for effectuation antecedents. Consequently, I used an experiment involving the careful development of a survey instrument and an experimental protocol, as well as their eventual pilot testing, the collection of quantitative data, and data analysis using a statistical software package. Again, I used theoretical sampling by selecting 91 participants who did not have any career experience, entrepreneurial or otherwise. An experiment was the ideal choice for investigating causal relationships, as it allowed me to control for the influence of a host of potentially relevant factors while manipulating focal variables (Colquitt, 2008). Even more, this particular experiment followed up on calls by other scholars in the field who suggested this approach with respect to understanding variations in entrepreneurial decision-making and action (Baron, 2009; Dew et al., 2009a).

The final stage of my research came about as I started to master the theoretical landscape around effectuation. Dealing with effectuation theory in the previous studies had taught me a great deal about its strengths, weaknesses, boundary conditions, measurement etc. Armed with this knowledge I was then able to tackle problems in adjunct research domains in which an

understanding of entrepreneurial decision-making under uncertainty was lacking. One such area as it came to my attention, was the study of entrepreneurial networking where scholars still struggle to reconcile entrepreneurial behavior with the notion of uncertainty. Hence, in this final stage I offered a synthesis of two closely related research domains (see also Table 1.1) by drawing on effectuation as a foundation to theorizing on entrepreneurial networking under uncertainty.

### **1.5. Chapter Overview**

The remainder of the dissertation proceeds as follows:

Chapter 2 examines the extent to, and conditions under which, founders' career resources influence venture performance. While the general link between the founder as an individual and firm-level outcomes is as old as the field of entrepreneurship itself, research studying it remains fragmented in both conceptualization and measurement. I therefore provide a systematic review, utilizing meta-analytical techniques to integrate the results from 72 studies with an overall sample size of 25,562, representing 15 years of empirical work in the field. As an organizing framework, I draw on contemporary career theory, which identifies careers as repositories of knowledge and thus categorizes individual career capital into three "ways of knowing" – knowing-why (e.g., identity, motivation, and values), knowing-how (e.g., skills and expertise), and knowing-whom (e.g., social relationships). The compilation of past findings into this new conceptual structure yields important advances to our understanding of the relationship between founders and firms. While I find that founders' career resources are positively related to new venture performance, the meta-analytic results indicate that these effects are relatively small in size and are further moderated by contextual factors related to uncertainty. I discuss the implications of these findings for entrepreneurship research and practice by highlighting the potential role of career resources as inputs for processes of entrepreneurial decision-making and action under uncertainty.

Chapter 3 ties in with the results of chapter 2 by empirically exploring how prior career experiences shape entrepreneurs' decision-making in the process of new venture creation. Building on the distinction between effectuation and causation as two primary logics of entrepreneurial action, I adopt a qualitative research approach, including verbal protocols and interviews with a sample of 28 entrepreneurs. Based on a detailed analysis I propose a framework of four different career profiles, which in turn, are related to different emphases on

effectuation and causation. In particular, I show how different career behaviors, as enacted over time in response to experiences with career uncertainty, are distinctively related to later use of effectuation and causation through their common foundation in the notions of prediction and control.

In Chapter 4 I continue to investigate how careers are related to entrepreneurial decision-making, yet rather than looking at experience, I examine what happens in its absence. Paradoxically, inexperienced entrepreneurs tend to rely on predictions and forecasts to make strategic choices in the face of inherently uncertain and fundamentally unpredictable futures. This study examines the role of entrepreneurial self-efficacy (ESE) and situational framing in mitigating the seemingly negative consequences of an “experience deficit” and promoting the use of effectuation - a non-predictive logic associated with entrepreneurial expertise. The results of a randomized experiment show that, in contrast to a control group and a low ESE group, novices who experienced an increase in ESE were more likely to use effectuation under uncertainty. This relationship was mediated by the framing of the situation as an opportunity. I therefore expect this study to stimulate future research into the antecedents of effectual thinking, particularly among those with little or no prior experience.

As a starting point, Chapter 5 builds on the idea that effectuation can be seen as a general model of entrepreneurial decision-making, and then shifts the focus to examine how effectuation theory may inform conceptualizations of entrepreneurial networking behavior under uncertainty. Although research has started to acknowledge the strategies by which entrepreneurs form and maintain network ties, most efforts to date present an incomplete picture of entrepreneurs as heroic network architects who search, plan, and pursue contact with targeted ties. In this conceptual study, I critically review this nascent literature, argue that it has so far overlooked alternatives in favor of an overly planned and instrumental perspective, and consider the implications of incorporating the notion of uncertainty into investigations of how entrepreneurs engage in networking. I therefore take a novel perspective on entrepreneurial networking and adopt an effectual lens to theorize about how entrepreneurs act when desired ties cannot be identified in advance, networking outcomes cannot be predicted, and ongoing social interactions fuel the emergence of new objectives. Overall, I add important insights to the literature as I flesh out an effectual networking process and discuss how it may stimulate a broader research agenda focused on the inquiry of networking agency under uncertainty.

In the last chapter (Chapter 6), I summarize the key findings from all studies and follow up on them with a general discussion of limitations, implications and opportunities for future research.

### **1.6. Dissertation Output**

The individual studies from this dissertation have culminated in international, peer reviewed, conference presentations, journal publication, and a number of awards. An overview of this output is presented below (Table 1.2), organized by chapter. Since my work on each individual study was done with a group of co-authors the first-personal plural (“we”) is used to refer to the authors in Chapters 2-5.

**Table 1.2.** Dissertation output\*

Chapter	Title	Main Research Question	Method	Conference Presentations	Awards	Journal Publication Status
<b>1</b>	Introduction	–	–	–	–	–
<b>2</b>	Firm Founders' Career Capital and New Venture Performance: A Meta-Analytic Review	What is the extent to, and conditions under which, founders' career resources influence new venture performance?	Meta-Analysis	Presented at the Academy of Management Annual Meeting (2011); Strategic Management Society Annual Meeting (2011)		Unpublished Previously R&R at the Journal of Business Venturing (JBV).
<b>3</b>	Careers and Entrepreneurial Decision-Making: Uncovering General Logics of Prediction and Control	How do prior career experiences shape entrepreneurs' preference for causal and effectual decision-logics?	Grounded theory Interviews Verbal Protocol Analysis	Presented at the Academy of Management Annual Meeting (2013); EGOS (2013); Effectuation Conference (2013); PREBEM (2013)	Best paper Proceedings at the AOM (2013); PREBEM (2013) Best Overall Paper	R&R at the Strategic Entrepreneurship Journal (SEJ).
<b>4</b>	Uncertain But Able: Entrepreneurial Self-Efficacy and Novices' Use of Expert Decision-Logic Under Uncertainty	In the absence of prior experience, what is the role of entrepreneurial self-efficacy and situational framing in promoting the use of effectuation under uncertainty?	Experiment	Presented at Babson (2014); Strategic Management Society Special Conference on Micro Foundations (2014)	Best PhD Proposal at the SMS Special Conference on Micro Foundations (2014)	Published at the Journal of Business Venturing Insights (JBVI).
<b>5</b>	Entrepreneurial Networking Under Uncertainty: An Effectual Lens	How do entrepreneurs engage in networking under uncertainty?	Critical Literature Review, Conceptual	Accepted for presentation at the Academy of Management Annual Meeting (2015); EGOS (2015); Effectuation Conference (2014);	Best paper Proceedings at the AOM (2015)	Expected submission to Entrepreneurship Theory and Practice (ET&P)
<b>6</b>	Discussion and Conclusions	–	–	–	–	–

*Note:* A shorter version of chapter 4 was published in JBVI, the longer version included in dissertation; \* updated as of April 2015.

